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THE
MARITIME MEDICAL NEWS
A MONTHLY JOURNAL DEVOTED TO MEDICINE & SURGERY

VOL. XVIII HALIFAX, NOVA SCOTIA, DEC. 1906. NO. 12

I

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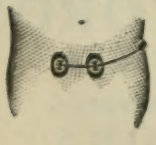

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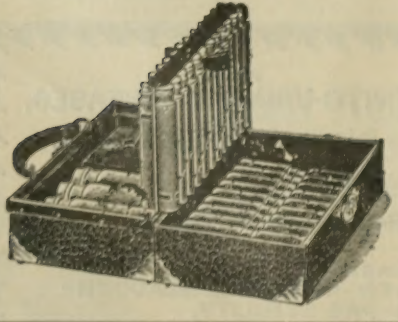

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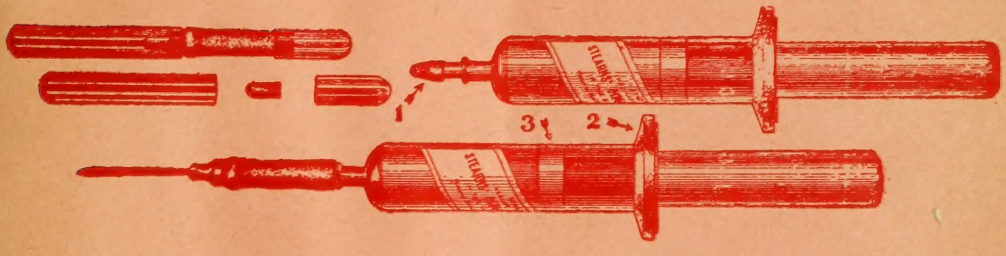

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THE
MARITIME MEDICAL NEWS
VOL XVIII, *DECEMBER, 1906*, No. 12

Tumours of Frontal Regions. Writing under the caption "The Diagnosis and Localization of the Tumours of the Frontal Regions of the Brain," in the *Lancet* of November 3, Dr. T. G. Stewart states that in diagnosis we must depend upon the presence of general symptoms of intracranial growth, the presence of mental symptoms, and the absence of focal signs pertaining to other regions of the brain. In order to localize a lesion, careful study must be made of any convulsions which may occur. Localizing symptoms may be homolateral and contralateral to the tumour. Homolateral signs include optic neuritis developing earlier and more intensely than in other eye, a fine tremor in the extended limbs, focal cranial nerve symptoms, and some local external signs. Contralateral symptoms include diminution or loss of the superficial abdominal or epigastric reflexes, extensor or indefinite plantar reflex, increased deep reflexes, and hemiparesis, While some of these symptoms may be absent, diagnosis can usually be made readily, and exact localization of the tumour usually be made readily, and is generally possible. The frontal region is perhaps the most accessible part of the brain to surgery, and operations on this portion offer a comparatively excellent prospect of success.

Polycythæmia. After referring to the previous literature of the subject W. Engelbach and O. H. Brown, St. Louis (*Journal of the American Medical Association*, October 20), report in detail, including blood findings, a case of their own observation, the thirty-fifth thus far recorded. They consider that the disorder is a well-established clinical entity and that the name polycythæmia, while indicating only one of the cardinal findings, is probably as fitting as any. No definite ætiology of the disease has yet been established. While tuberculosis of the spleen existed in most of the earlier cases others have since been reported in which this did not occur. While a demonstrable mechanical cause existed in Reckzch's case, his theory of the stagnation of the blood is not borne out by the other recorded cases. Careful clinical study including analysis of the blood and complete histologic examinations of the bone marrow, spleen, thymus, liver, adrenals and other tissues will be needed to open an investigation as to the ætiologic factors causing the pathology. The clinical findings are variable, but cyanosis, splenic enlargement, headache, vertigo and the blood findings of polycythæmia without positive obvious cause are common to the majority of cases. The authors

give an analytic summary of the usual and occasional symptoms. The course of the disease is progressively bad, though with short remissions, but it may be slow, as in the author's case, in which the symptoms have lasted 11 years. A positive diagnosis is made on the findings above mentioned, but some of these may not be very conspicuous. Cyanosis may not be generalized, and splenic enlargement may be slight. Tuberculosis of the spleen should be looked for. Other conditions causing chronic cyanosis should be excluded. The blood findings differentiate this from all other splenic enlargements, but a good many conditions presenting abnormal increase in the erythrocytes must be excluded, such as those following excessive elimination of body fluids, impeded circulation, anæmia, in which a localized polycythæmia may exist, syphilis and Addison's disease. The prognosis is bad as regards cure, and the treatment has been very unsatisfactory.

Backward Displacements of Uterus. The subject of backward displacements of the uterus is exhaustively considered by G. Richelot in an article appearing in *La Gynecologie*, June, 1906. Reference is made in particular to primary retroversion (*i.e.*, displacement independent of any other pelvic disorder), which occurs at all ages; and is frequently found in young girls where the ordinary causes of infection can be excluded. The uterus is generally enlarged and may be considerably congested, hypertrophied and indurated, but is moveable and free from adhesion. The cervix at first may appear normal save for a clear discharge: later it becomes enlarged, indurated, violet in colour, and the secretion is profuse in quantity and milky in appearance. The ovaries are sclerosed, contain cysts, and may be much enlarged. The condition often occurs without any infection. Mechanical causes, such as prolonged decubitus, over full bladder, constipation, etc., are to be considered. These, however, would not be sufficient if there were no predisposition, and that such exists is made probable by the frequent coexistence of mobility of kidney, enteroptosis, hernias, etc., all showing laxness of fibrous tissue. This tendency to relaxation of fibrous tissue is a feature of neuro-arthritism, and we often find associated other indications of neuro-arthritism: migraine, articular pains, dyspepsia, constipation, hæmorrhoids, varices, and hysterical disorders. The malposition of uterus leads to the production of various pelvic symptoms, notably dysmenorrhœa, menorrhagia, intermenstrual discharges, pains in perinæum, back and thighs, etc. The treatment consists in the reposition of the uterus, and this the author secures by a medium laparotomy, grasping each round ligament at some distance from the corner of the uterus at that part which is always resistant, and fastening it by two or three catgut stitches to the lower end of the wound.

Infection Through Tonsils. Dr. Charles M. Robertson, of Chicago, writing in the *Journal of the American Medical Association*, November 24, presents some observations made in the last few years on the entrance of tuberculosis into the general system with special reference to the faucial tonsil. He describes in detail the anatomy of this structure and its relations to other parts. He relates his researches and in regard to infection states that if the surface membrane were the point of entry we should find tuberculous changes here. This he has never seen in the slides examined. It has always been in the crypt. The crypts which empty into the throat direct are seldom if ever affected. Those emptying below the middle of the gland were not affected in a single instance. The greater number of infections were from crypts emptying into the supratonsillar fossa. The part of the crypt affected is universally in its deeper extremity where giant cells are abundant in the tuberculous tissue. A few giant cells were at times noticed along the beginning of the crypt but in these sections they were less in number than in the deeper part of the crypt. The cells were found dispersed in the tissue as far as the trabeculæ which seemed to limit the spread of the tuberculous change. When the gland is diseased, he says, it is important that it be enucleated completely, and that pockets in the soft tissues around the tonsils must be destroyed. He describes his treatment and technic and discusses accidents liable to occur during and after operation. The article is fully illustrated.

Paralysis without Gross Anatomic Change. Dr. J. H. W. Rhein, Philadelphia, gives the histories and pathologic findings (in the *Journal of the American Medical Association*, November 24), in seven cases of paralysis associated with chronic kidney disease, such as are not infrequently regarded as of uræmic origin, gross anatomic lesions being wanting. The microscopic examination revealed the lesions of probable or possible syphilitic disease of the brain in all the cases, round-cell pial infiltration and vascular thickening, etc., but in two of the cases minute patches of softening in the paracentral region were discovered. Rhein believes that such patches, undetected by macroscopic observation are often the cause of hemiplegias reported as not associated with gross anatomic changes. Another cause which should not be overlooked in these cases is syphilis, and he emphasizes the importance of careful and extensive histologic studies of the brain and spinal cord before excluding demonstrable lesions, in reporting these cases. The perivascular distension which is extensive in some of the cases may also, he thinks, play its part in the production of the transitory paralyses that are observed.

Pancreatic Extract in Cancer. Writing in the *Medical Record* of November 24, Dr. Clarence C. Rice reports a case of apparent cure of cancer of the

larynx, resulting from subcutaneous injection of pancreatic extract. Rice says that the hypodermic solution which he used in this case contained the trypsin enzyme in its natural association with the other gland constituents, notably the amylopsin. This solution was obtained from the fresh gland under rigid aseptic methods. It was a sixty per cent. glycerin extract, sterilized by filtration under pressure, and taken up in vacuum into glass ampoules and then immediately sealed. The patient whose history the writer reports, was a man seventy years old. He was treated by injections of pancreatic extract, together with the internal use of a similar preparation. This was administered in three-grain capsules, three times a day. There was evidently a distinct ameliorating effect by this treatment on the growth, which was considered to be carcinoma. As the patient was obliged to leave this country for a short time, the more permanent results cannot yet be reported. Other cases have been treated in the same manner by the writer, four in number. One of these was successful.

❦

Saline Solution in Fever. Dr. J. Madison Taylor, Philadelphia (in the *Journal of the American Medical Association*, of November 10), advocates the free administration by the mouth of the normal physiologic salt solution in all febrile conditions in children. He gives it usually every three hours, about half an hour before feeding time. With infants the solution is used in milk modification and for diluting whatever liquid food is used. The saline taste is hardly perceptible, and the children soon come to have no objection to it whatever. He argues that in fever the blood's main salt, sodium chlorid, which is lost in large amount in excretions, is not replaced, owing to restricted diet, anorexia and other factors diminishing the intake, and the blood is therefore deprived of one of its most important constituents. The regular administration of saline solution makes up this deficiency and aids the patient to overcome the disease. A number of case summaries are briefly reported.

❦

Canadian Out-Door Life. We bid welcome to a new monthly from Toronto, *Canadian Out-Door Life*, published by the National Sanitarium Association of Canada, and devoted to the gospel of out-door life in the treatment of tuberculosis and the value of fresh air and hygienic living for everyone. The initial number is attractively garbed and is full of valuable information presented in non-technical language. The intention is that all profits of the magazine will be devoted to the maintenance of patients in the Muskoka Free Hospital for Consumptives. A meritorious magazine published for such a purpose is surely deserving of generous support, and we cordially wish the venture every success. The subscription price is one dollar annually. Communications should be addressed to Mr. J. S. Robertson, Secretary National Sanitarium Association, Toronto.

Importance of the Vasomotors. Dr. W. C. Abbott contributes an article to the *Medical Record* of November 10, in which he emphasizes the importance of a clear understanding of the vasamotors, and urges the utilization of their function in therapy. He declares that perturbations of the vasamotor equilibrium form the earliest evidences of disease in the large majority of maladies. The first response to any abnormal irritation is noted in an alteration of the caliber of some part of the circulatory system. A change of this nature is usually requisite for the production of pathological lesions that are recognizable by microscopical investigation. There may occur either a condition of spasm by which the vessels are contracted and the blood is forced out into the general circulation, or a state of paresis in which the dilated vessels receive more than the normal quantity of blood which leaks into the area of low pressure. Remedies should be applied before the difficulty has progressed beyond the simple disorder of tonicity-excess or deficiency. The four great vasomotor remedies are, aconitine, veratrine, digitaline, and strychnine.

Cortical Association Notes. Dr. S. I. Franz, of Waverley, Mass., contends, in a paper which appears in the *Journal of the American Medical Association,* November 3, that certain physiologists have generalized a little too broadly in making the frontal lobes the chief seat of intellectual function in the brain. From experiments on cats and monkeys, which he describes, he concludes: 1. In monkeys as well as in cats, the frontal lobes are normally employed in the formation of simple sensory associations. 2. When the frontal lobes are destroyed, recently formed habits are lost. It has been found possible, however, for the animal to form new associations or to relearn old tricks. 3. When the associations are firmly established, destruction of the frontal lobes is not always followed by a loss of memory. There are all degrees of memory for any such particular habit, from perfect to very decided hesitancy and slowing. 4. In this latter event the cerebral path is probably shortened, and the nervous connection of the sensory and motor elements of the association takes place through tracts at the brain stem. The association therefore has more of the character of a reflex. Franz believes that these findings in monkeys have a suggestive importance to workers in human cerebral pathology. Clinical as well as physiologic evidence points to the importance of the frontal lobes for the intellectual functions, but he does not think that the reported clinical facts are yet sufficient to prove this. He suggests that simple observational methods are insufficient to determine the changes that take place in man, and that accurate psychologic and psychophysical methods should be more frequently employed.

The Supply of Milk.

Among the many important subjects with which the physician and the sanitarian have to deal is the subject of a supply

of clean, pure and standard milk, and as milk is a necessity for the invalid and the sole food of the infant, a very large part of the population is equally and vitally interested in the question. The water supply of cities is now fairly well looked after, as a knowledge of what is necessary in order to obtain purity in this respect has been published far and wide, and engineers in laying down a water supply for a city take these requirements into consideration. But milk is obtained from the farms, and the water supply of farms is, as we know, not always above suspicion—and indeed in many cases very bad indeed. Conditions are such in this country, and indeed in all civilized countries, that many of what were formerly spoken of as water-borne diseases may now be more fairly, perhaps, termed milk-borne. The subject of the control and inspection of the milk supply is one that appeals to the interest of everyone. On how many farms, for instance, in these Maritime Provinces are the bodies and udders of the cow cleansed before milking? How many of the milk-men or milk-maids prepare themselves for this operation by specially cleansing their hands and donning clean clothing? These questions need only to be asked; the answer is obvious. But in addition to cleanness and purity, milk should also contain its proper proportion of butter fat and other solids, for on these its value as a food depends, and it ought not to be possible for the dealer who sells a sky blue milky fluid to get the same price for his product as the dealer who supplies a pure standard milk.

A very great deal of interest is being taken in this subject in many cities, and by-laws have been passed regulating the trade in milk, standarizing its quality, penalizing those who do not conform to the regulations as to cleanness of cans, wagons and transit vehicles, and generally bringing the whole trade and those who engage in it under control. Boston is taking a particularly advanced stand in this matter and has its milk supply, the places where it is sold and the vehicles and cans in which it is conveyed constantly and daily inspected. That the inspection of the milk was not made before it was needed is shown by the fact that out of six thousand samples bacteriologically examined no less than eleven per cent. contained pus. The matter is well worth being taken up by the health authorities of our cities and counties, and the profession generally could do a great deal to educate the farmer and dealer in modern methods, and show them the absolute necessity of taking those precautions without which it is impossible to obtain clean milk. In another part of this issue is an article bearing on the subject recently read before the St. John Medical Society, and showing what is being done in that city to control the supply.

A FEW NOTES ON THE RECENT EPIDEMIC OF SMALL-POX IN NEW BRUNSWICK

(1905 AND 1906)

By PERCY F. BUTLER, M. D.,

McAdam, N. B.

(Read before the New Brunswick Medical Society.)

WHEN called upon to prepare a paper for this occasion, I was, for a time, in doubt, as to an appropriate subject; one that would interest the profession. But having had occasion to observe a few of the small-pox cases during the last few months, I finally decided to make that my selection. Not so much on account of any new clinical phenomena observed, but to correct if possible some of the erroneous ideas still held by the laity and many of the profession as to its true nature, and thus prevent a wider dissemination of an epidemic that might be of greater virulence in the future.

Many physicians never have an opportunity to see variola, so cannot act from knowledge gained by personal experience, but depend entirely on typical symptoms described in books of medicine, and are thus often misled by the irregular types now so common, making a diagnosis in some cases almost impossible.

It is my intention to trace the course of this epidemic as far as possible with the data at my command. The chief clinical symptoms observed in two authentic cases closely resembling variola, but not reported to the authorities, and some distinguishing diagnostic points observed by the Assistant Sanitary Superintendent of the Department of Health for New York city, out of 1,000 cases of this irregular type examined.

HISTORY.—Early in the fall of 1905 a disease variously called varicella, Cuban itch, etc., was prevalent along the line of the Canadian Pacific Railway between St. John and Vanceboro. The general symptoms closely resembled small-pox of a benign type, but so many families were affected and recovered without medical attendance that a widespread condition of affairs existed before its true nature became evident. Cases were also noted in the vicinity of Fredericton, and along the St. John river.

At what particular point it originated is still a mystery. For the last few years cases of this irregular form have been observed in Quebec and the northern counties of New Brunswick, and the theory has been advanced that it was carried from one of these foci.

Another belief, which prima facie is erroneous, is that a person returning from Washington State, where it is said to have existed, conveyed the infection to Tracey. But cases were known to have broken out

there before his arrival, and over twenty days elapsed before he, or his family, showed signs of the disease.

From Tracey it was first introduced into McAdam, about the last of August by a young man and his sister who had stayed at an infected house in that locality. Following these, within the incubation period, one other member of the household , a frequent visitor; three members of a neighbouring family and three boarders developed a similar rash. The remaining five vaccinated members of both families were not affected.

It was not until the fourth day of December, 1905, that a case was brought to the notice of the Board of Health. The other cases recovered without medical attendance.

Some time between February and the first part of April, 1906, three cases occurred, but were not discovered until the second authentic case had been reported on March 26th. Then careful enquiry revealed the previous presence of the other cases, and shewed an unbroken chain of infection between them all.

Coincident with these at McAdam, a similar condition was observed along the line of the Maine Central in Maine, at Prentice, Wytopitlock, and several lumber camps, all traceable to the same source. These were variously diagnosed, but it was not until the first of March, 1906, after it had been carried broadcast, that it was pronounced to be variola, and the usual precautions taken. Cases were also reported at Canterbury and Upper Mills.

With the end of March all cases had practically disappeared, and the epidemic for the time was checked. Still, it is probably only dormant, awaiting but the proper climatic conditions, and fresh material to again awaken with increased vigour and possibly increased virulence.

Report of Cases.—Before proceeding to report the authentic cases, it might not be out of place to enumerate the symptoms and course of a few unsuspected cases subsequently discovered, with description by the patients themselves.

About the last of August, 1905, ten or twelve days after contact with the disease at Tracey, a young man and his sister began to complain of chills, fever, some vomiting, and general pains, most severe in the head and back. Three days later a rash was noticed, resembling a small red pimple, first on the forehead, then on the side of the nose, face, back of wrists, and finally all over the body. In a short time these became flattened at the top, and contained a thin watery secretion, which soon turned to pus, then crusted over, and after a course of two weeks entirely disappeared, leaving a few superficial pits.

With the appearance of the rash the fever dropped and general conditions improved, the young man resuming work on the second day. During the later stage, itching was the only subjective symptom present.

Neither party had been previously vaccinated. A history of varicella in one, possibly in both,

was obtainable. Vaccination afterwards was partially successful, the arms, around the points of inoculation becoming inflamed, and scabs forming, which on clearing left small eschars, which are, however, very indistinct at the present time.

Within fourteen days of the appearance of eruptions in the former cases, an inmate of the house, and a near relative, showed like symptoms, followed by a similar disease. No vaccinated member was affected.

About the same time a young lad, a frequent visitor at the house, contracted a like disease, ushered in by vomiting, pains and fever, followed by a few papules on the forehead and dorsal aspects of the wrists which gradually disappeared in the course of ten to twelve days without further changes. His sister and four boarders were next affected, within the incubation period of small-pox. With two of the boarders, eruptions appeared exactly fourteen days after their entrance into the house and contact with affected people. The cases all differed in severity, the sister having only a scattered rash, few going on to pustulation. With the boarders, after severe prodromal symptoms confining them to bed for several days, rash appeared all over the body, passing in succession through papular, vesicular and pustular stages, followed by crusting and desquamation. One, a late comer, was almost completely covered, the scalp, face, hands and exposed parts particularly so. Itching was intense.

Sore mouths were complained of in all cases. None had been previously vaccinated. Subsequent vaccination was unsuccessful. All had previously had chicken-pox, and no vaccinated member of the family was affected. Three still show well marked although superficial pits.

On December fourth, 1905, the first authentic case was reported. The patient, a young man about 22, when first seen was sitting with the other members of the family suffering no apparent inconvenience with exception of some itching. For two weeks he had been in contact with cases at Tracey, and five days previous, while firing an engine on the line, he began to experience pains in head and back, followed by vomiting and fever. Two days later he noticed a fine rash, slightly raised, on the forehead, nose, and wrists. With its appearance his condition improved.

When first seen, five days after the initial sickness and three days after appearance of eruption, a few vesicles about one millimetre in height, umbilicated at the top, and filled with a clear watery fluid, surrounded at base by a red inflammatory areola were noticed. These vesicles numbered ten or twelve, seven or eight on the forehead near the hair, two on the side of the nose, and one on the mucous membrane of the mouth. Each wrist, the palm of one hand, and the soles of the feet near the base of the large toes, also showed a similar lesion, and a few were noticeable on the body, while papules could be felt under the

skin. Temperature 99 deg. F., pulse 80, appetite good. Four days later these vesicles had changed into pustules with yellowish tops, which gradually dried, forming brownish crusts. Desquamation was not complete until the twentieth day, the face being the first to clear, then wrists and other parts of the body. One vesicle remained on the palm of hand until the twentieth day. Few pits resulted, although one or two small scars may be seen on the side of the nose. The vaccination mark could be dimly seen on the arm. A history of varicella in childhood was obtainable.

The second case was first attended on the twenty-first day of March, 1906, but it was not until the 27th that a diagnosis was possible.

On the 14th, the patient, a rather headstrong young man, complained of severe chills and cough, with an indisposition lasting over a week, but medical attendance was not summoned until the 21st, when in addition to severe pains in the head and back, with cough, he complained of vomiting and constipation. Fever 103.5 deg. F., pulse rapid, respirations 30, expectoration free, sputum rusty.

Examination showed an area of dulness over the base of right lung with blowing breathing and rales. A diagnosis of pneumonia of some days was made and appropriate treatment instituted.

By the 23rd, symptoms had abated, and temperature was normal. He was not visited on the 24th, and only a casual examination was made on the 25th. Returning at noon of the 26th, patient was found covered with an eruption which was most plentiful on the face and wrists, but was also seen in the mouth, palms of hands, soles of the feet, and other parts of the body. In character most were pustular, a few vesicular, with inflamed bases. All were discrete. A few showed distinct umbilication. Fever high, pulse rapid and full, severe itching and discomfort complained of. A needle prick in pustule caused no discharge of contents. The house was temporarily quarantined until night, when the opinion of another physician was obtained, and stringent measures were carried out. All members of the house were vaccinated and no other cases developed. Three days later most of the lesions had crusted, and on April 13th quarantine was raised.

After recovery a few pits were noticeable, particularly on the nose and forehead, and for a time a bluish tinge appeared, wherever rash had been, after a full bath.

Ten years before patient had chicken-pox, and four years ago was vaccinated. After attack vaccination was negative.

Enquiry as to the possible source of infection revealed the following: That early in December a child, living in part of the house, who had been handled by a woman a few days later quarantined with the first case, had after a few days' sickness, with vomiting and high fever, developed a rash, at first red and slightly raised, then covered on the top with a pus-like material finally crusting and disappearing in about

two weeks, leaving one fine scar on abdomen. Two other children were similarly affected a short time later. Patient was constantly in contact with these cases, and no fumigation had been carried out, thus leaving a suitable focus for infection, and forming a strong link connecting all cases previously reported.

Synopsis.—Making a brief synopsis of the information obtained, an undoubted infectious disease, affecting most unvaccinated persons and those showing but doubtful vaccination, is known to have existed in several communities, attacking many in each, and easily traceable from one to the other.

The disease, though mild in type, resembled small-pox in every instance in its prodromal symptoms, the fall of fever after the appearance of the eruptions, and slight rise at pustulation. But it differed from the ordinary types in the changes noticed in the eruptions, some changing from the papular to the vesicular and pustular form in a much shorter time than usually noted, one possibly not going beyond the papular stage, but at the same time in the same family others showing in regular sequence papules, vesicles and pustules, with desquamation, followed by pitting after 10 to 20 days.

The papules appearing first on the forehead near the hair, the mucous membrane of the mouth, the wrists, palms of the hands, soles of the feet, and body, and re-vaccination afterwards proving practically unsuccessful, must leave little doubt as to its true nature, although there is a possibility of an intercurrent varicella.

Whatever the true diagnosis, and by a system of exclusion variola is strongly indicated, it might not be infringing too much on your time and patience to present a few of the differential points observed by Frederick H. Dillingham, A.M., M.D., Assistant Sanitary Superintendent of the Health Department for New York city, after examination of over 1,000 cases of this irregular form.

The diseases the most liable to be confounded are varicella, measles, pustular syphilis, acne, impetigo contagiosa, typhus fever, typhoid fever and cerebro-spinal meningitis.

Between small-pox and varicella, the following was noted:

Small-pox.—The invasion in small-pox is generally more severe and lasts three or four days, although in some cases it is not noticed and does not last over twenty-four hours, and there may not be any secondary fever. The eruption appears first on the mucous membrane of the mouth, then on the forehead and wrists, although it may be seen in other localities. The fever usually falls with the appearance of the eruption but not always. The lesions are generally more uniform and are deep seated, but may be superficial; when the latter occurs a few typical lesions can generally be found. The eruption first appears as shot-like papules which become vesicles before the second day. A few may appear as vesicles with indurated bases or become so in a few hours. A few papules can usually be found. The pustules remain whole for a number of

days, and the secretions are turbid, while the lesions occur over the whole body.

Varicella.—In varicella there may be few signs of invasion, the eruption appearing on the first day, and not being followed by a secondary fever, but a rise of 1 or 2 degrees with their occurrence. The eruption appears first on the shoulders and chest, but may be seen on the mucous membrane of the mouth and other parts. These lesions are superficial, flat and irregular in shape, but may be deep seated. In the latter case irregular lesions can generally be seen. The eruptions appear as macules, become vesicles in a few hours, can easily be brushed off, and collapse early. Papules may occasionally be found on the palms and soles, a location where they are not commonly seen. A few vesicles may also show umbilication. The pustules become flattened and break in two or three days, and the secretions are usually more transparent. The lesions come out in successive crops, few scars resulting.

Measles.—In measles the catarrhal symptoms are a great aid in arriving at a correct diagnosis. The fever is not so high at first, but gradually increases, reaching its height while eruptions are still spreading, then becomes normal, but without the sudden drop seen in small-pox. The lesions spread rapidly, are cresentic, never have the same shotty feeling, and no vesicles or pustules develop.

In the morbilliform rash of small-pox the eruptions are less elevated, disappear on pressure and usually occur in groin and axilla.

Scarlet Fever.—In hæmorrhagic small-pox, when the scarletiniform rash is present, it might be confused with scarlet fever, but the symptoms are more severe, the eruptions do not disappear on pressure and the red is more intense, while the rash in scarlet fever generally appears first on the neck and chest, then spreads over the whole body. With this the anginal symptoms and swelling of the lymphatics, with the characteristic tongue, are not present. The largest number of cases of scarlet fever occur in children.

Syphilis.—In syphilis there may be pain and fever, but the fever does not disappear with the eruption, while the eruption is usually papular with vesico-pustular tops. The history would decide although cases may be intercurrent.

Acne and Impetigo Contagiosa.—Acne and impetigo contagiosa are simply local affections without constitutional disturbances.

Typhus Fever, Typhoid Fever, Cerebro-Spinal Meningitis and influenza could not be mistaken after the characteristic eruptions appear.

Taking all into consideration it can easily be seen that before the appearance of eruption a diagnosis is impossible, and then only after the history, lesions, duration of lesions, individually and collectively are considered. Then, even, it is almost impossible in some cases without a large experience to make a correct diagnosis, so that in cases brought to our notice during the last year, if many mistakes were made, it is not to be wondered at. But it is to be hoped that the experience gained will enable the profession to better safeguard the interests of the public in the future.

THE CARE OF THE ADOLESCENT

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(Read before Medical Society of Nova Scotia, July, 1906.)

RECENT reports of the Nova Scotia Hospital have called attention to the increasing proportion of young patients coming to us for treatment. Our experience in this particular corresponds with that of other institutions for the insane in various countries. So pronounced has been the increase in some localities that most alarming issues have been predicted. In the United States particularly, where Kraepelin's teachings have acquired so strong a foothold, much anxiety is being occasioned; for Kraepelin offers a very poor prognosis in dementia præcox, which is the most distinctive and at the same time one of the commonest of the mental disturbances of youth. There can be little doubt but that the enthusiasm with which the great German psychiatrist's teachings have been accepted by his American admirers has led them to extremes, and they have diagnosed dementia præcox in many instances which Kraepelin would have classified differently. Consequently they have taken a graver view of the problem than is really justifiable. But, looking at the facts which present themselves in the most dispassionate manner possible, it must be admitted that in the insanity which manifests itself in youth we have a matter of extreme importance, whether viewed from the medical, purely psychiatrical, sociological or economical standpoint.

Various psychoses attack young people. The earlier attacks of the exaltation, the depression, or the admixture of exaltation and depression which characterize manic-depressive insanity, are apt to appear before the age of thirty. The toxic and exhaustive psychoses, as well as those associated with epilepsy, hysteria, etc., may come on at a comparatively early stage. But the particular type of mental disorder seen in young persons is that to which the term dementia præcox is rather arbitrarily applied. This is a condition which seems to be appearing with increasing frequency, from which complete recovery obtains comparatively seldom, which in most instances tends steadily to dementia, dooming its victim to a life of uselessness and unproductiveness—a life which may be prolonged over many years, causing great and ceaseless distress to friends and continuous expense to the state. Probably well on to fifty per cent. of the cases of insanity developing before the thirtieth year of life are to be placed in this category.

A consideration of the symptomatology of this condition is scarcely possible in a short paper. The symptoms are many and varied, and while a few are

almost characteristic their description and explanation cannot be accomplished in a few words. It is, therefore, my intention to limit this paper to a review of some of the factors which may possibly contribute to mental breakdown in youth. Because of the fact that prognosis in these cases is so grave, it would appear especially advisable that full value should be attached to prophylaxis; and before we can apply preventative measures we must know about the ætiology.

Dementia præcox so commonly develops during the years of adolescence that it is by many regarded as essentially a disease of this period. The adolescent period is usually considered to extend from the time of puberty to the age of about twenty-five in boys and about twenty-one is girls. While physiologically this is no doubt a sufficiently accurate limitation, psychologically the age of incidence should be set back probably two or perhaps three years. That is to say, the indications of mental maturement are commonly noted to begin at latest coincidently with the increase in growth and weight which antecede the other physical changes consequent upon the sexual divergence of maturity. It is in this somewhat extended sense that the period of adolescence is considered by the alienist, and also by the neurologist.

Very many of those who break down mentally at this time of "storm and stress" are predisposed by a bad inheritance. Now when the influence of heredity is considered in a psychiatric problem, more than a history of insanity in the forebears is looked for, and anything indicative of an unstable nervous organization, special eccentricity, drug habituation, criminal tendencies or physical disability—especially such as is caused by tuberculosis and arthritism—is to be carefully noted. It is always to be remembered that insanity is not inherited, but the predisposition thereto—quite as is the case in tuberculosis. And the danger of a mental collapse is an adolescent predisposed to disorder of the mind is so great that it should ever be kept in view by the physician. This point cannot be too strongly emphasized. In every case in which there is a history of neurotic or insane inheritance, the utmost care should be bestowed upon the youth until full maturity has been reached.

The earlier years of life, in which growth progresses more or less unevenly, and in which the various structures concerned in the maintenance of the individual's own life *only* are developing, are years in which learning is acquired largely by imitation, and in which the originating faculty is but little exercised. With the advent of puberty, however, there is not only the remarkable change in bodily conformation which comes with sexual maturation, but there is a very characteristic change in the mental attitude. This may in part result from the influence of the internal secretion of the sexual glands, but doubtless much is also due to the physical changes which the youth finds himself undergoing which attract his attention and excite more or less introspection.

Adolescence, moreover, means more than the development of the sexual apparatus—it means the unfolding to complete functional activity of all organs and structures, and it is consequently a period of marked nutritive activity. It is not surprising that the thoughts, turning upon these peculiar changes in physique, lead the adolescent to speculate upon their meaning, and have a tendency to create a deeper and more serious interest in life than previously existed. While imitation continues to play an important part in education, as indeed it does throughout life, there now develops a greater or less degree of independence or spontaniety of thought. Consciousness, which has hitherto been concerned mainly with events of the outer world, becomes influenced by the great volume of nerve currents which flow in from all the viscera and especially those just becoming functionally active. As Bevan Lewis expresses it: "The vast accession of new impressions registered by the sensorium when these organs awake to functional activity during puberty has a most profound effect on the mental constitution—an effect whose significance cannot be misinterpreted; for the result is a real transformation, more or less, of the ego, with all its feelings, emotions, sentiments and desires."

The first effect of this transformation is to cause a certain confusion—an indefiniteness. It takes the youth some time to sort out and properly interpret the new sensations which come to him in such abundance. But out of it comes a period of great activity, marked by high ideals, exaggerated ambitions and an overmastering desire for action. It is a very critical period in the mental life of the individual—one during which a comparatively trivial cause may be sufficient to disturb the balance beyond recovery. It is, therefore, of the utmost importance that all who have to do with the growing youth should fully appreciate the need for especial care in the exercise of influence and control. This is true with reference to every individual, no matter how normally constituted, but it applies with special force to those who have been "nervous" and uncontrollable in childhood, or who have a bad heredity.

Now if it be true that the future health of the individual depends so much upon the manner in which the years of sexual maturation are passed, it is reasonable to assume that the disturbing influence of adolescence may, in turn, be felt in great degree or in small degree according to the state of health at the time of incidence of the adolescent period. It is the duty of the physician to influence to as great extent as he can the years of a child's life which mark the approach of puberty. Look out for the child who has had convulsions, pavor nocturnus, chorea, marked delirium with an infectious disease—or who is very emotional and imaginative, or who is given to digestive disturbances or phobias, or who is imperious and lacking in control. In a general way, it may be said that it is of exceptional importance to guard against any of the infectious fevers at this time—and especially

against typhoid, scarlatina, small-pox, rheumatism and diphtheria. It is also very essential that the circulation should be free and vigorous. I have somewhere seen that a celebrated head master once said that the difference between a clever boy and a stupid boy lay in the strength of the heart, and that there is more in this than mere platitude is indicated by the care taken in institutions for the feeble-minded to secure a proper tone in the vascular system. Because of this, any conditions likely to react unfavourably upon the circulatory system, notably rheumatism and chorea, should receive very careful attention. Anæmia, too, should be guarded against, or combatted if present, and every effort made to secure the best possible state of nutrition. Eyestrain, because of its exhausting influence upon a delicate musculature, should not be allowed to go uncorrected. And any condition, such as myxœdema, suggestive of deficiency in some internal secretion, should receive appropriate treatment.

There are a few conditions which have been assigned a causative influence in mental disturbances of the adolescent period which are perhaps quite without the pale of the physician. Such are traumatism, fright and ill-usage. But general lack of hygiene in the home is a cause over which the physician should be able to exercise some control, and when lack of proper food may mean the doom of an individual to a life of dementia as the ward of the State, there is surely justification for demanding the State to interfere and see that such a cause be eliminated. City-born and city-bred children of the poorer classes are especially apt to suffer from bad hygiene and insufficient food, and they supply a notoriously large percentage of our mental and moral defectives. Criminality and insanity are bred side by side in the slums of the cities, and will continue to be until men realize that prevention is not only better but cheaper than cure. And here the physician has an opportunity to work hand in hand with those more rational humanitarians who with soft hearts possess hard heads.

Another feature of city life which doubtless contributes to the commonness of mental breakdown in city youths is the pernicious appeal to the sexual instinct so common in the overcrowded tenements, alleys and pleasure resorts of the poorer districts. This, bad at any time of life, is naturally most injurious during the time in which the sexual organs are just becoming functionally active.

While providing as perfect health as possible for the child approaching puberty, it is also well to advise the parents in the matter of discipline. This is not only a delicate matter, but it is one which is singularly difficult because of the various opinions held as to how discipline should be enforced. The moral effect of sound discipline is, however, unquestioned, while the child who has been pampered and indulged and has learned nothing of self-control is particularly likely to suffer

unduly from the strain of the adolescent period.

It is, however, a wise precaution to protect the child against any influence which would tell too strongly upon either mind or body. Here we know little of the great problem of child labour, which, in some countries, has become momentous indeed. But it is possible—may I not even say probable?—that in the school curriculum of the present day, with which we have experience, so much is exacted of some pupils as to constitute a veritable overstrain.

Evolution usually progresses slowly. The capacity of a race, in any particular, increases gradually, imperceptibly. And what is true of a whole race is applicable to individuals and to groups of individuals. Before an individual is capable of acquiring special knowledge—speaking in a general way, for there may be exceptions—his forebears—not necessarily the immediate forebears, but his ancestry through several generations, must have developed and transmitted aptitude in that particular. Hence the danger of imposing too much upon the unevoluted child—especially the child of newly-riched parents, who have not been too wise in the attempt at adaptation to changed circumstances.

Some years ago Bevan Lewis, Batty Tuke, and others pointed out that degeneration of the brain cells might be induced by over-strain. As Berkley well expresses it: "Nature is most beneficent and repairs the effects of over-activity whenever possible, but limits may quite readily be reached beyond which it is not safe to pass, especially for those that bear the burden of an hereditary taint; beyond this point it is impossible for the natural reparative forces to overcome the strain; constructive metabolism is unequal to the drain upon it, or is defective, and there results either temporary or permanent mental disability. From the standpoint of the experiments of Hodge and the later ones of Van Gehuchten and Marinesco, overstimulation of the nerve cell can only be recovered from when it has not proceeded beyond a very fixed and definite limit."

The point to be deduced from this is that as in a race, so also in an individual, a greater task should not be imposed than the processes of evolution have fitted him for. This being so, may not the question reasonably be asked, "are not many of our school children required to undertake studies for which their mental capacity is insufficient?"

According to Krafft-Ebing, "next to his brain organization, man owes most to the nature and manner of his education as affecting the peculiarity of his mental character." This statement by one so widely known as a psychiatrist of unusual eminence surely justifies a consideration of the question of education. In this connection I have thought it well to quote from some authorities rather than to set myself forward as a critic of our educational system. Quotations might be multiplied to an almost unlimited extent, but I will proffer only a few.

"The faulty high-pressure, educational methods now in vogue in our ordinary schools are

responsible for a large number of the mental breakdowns noticed between the ages of ten and twelve years, as well as later. Although the actual growth of the cerebrum at this period is quite advanced, and the size of head approaches that of the adult, the tissues themselves are far from mature, and are totally unable to cope with the undue stimulation and pressure which false educational methods lay upon them." (Berkley, p. 562.) "In some bright but ill-balanced children, overstrain at school is sufficient to set up a retrograde movement that only stops with the destruction of their mental vitality. Sleep and the best of nourishment seem powerless to renew the exhausted nerve protoplasm, and when the vital energy is drawn upon too severely a restoration of the integrity of the cell cannot be brought about." (Berkley, p. 554.)

"That the enormous increase of nervous and mental diseases, one of the most serious menaces to public welfare, is the immediate result of trying to educate numbers of individuals whose central nervous systems are functionally unable to withstand the strain imposed upon them, is obvious to all those who are competent to judge of such matters. If the aid of intelligent physicians were sought in determining the question as to what children were fitted to receive a public school education, unquestionably many cases of insanity which develop later in life would never occur. It is a curious comment upon popular government that so little effort is being made along these lines, and that, while the public has the right to prevent the spread of measles or scarlet fever, it assumes no authority in matters relating to the prevention of alienation." (Paton, p. 198.)

"In general, the education of children of the higher classes must be characterized as defective. All too early does the struggle for existence affect these children in the form of exorbitant demands in school, which can only be satisfied at the cost of sleep and physical development. In this way a neuropathic constitution may be acquired, and thus the foundation laid for later insanity." (Krafft-Ebing, p. 165.)

The following extract from Maudsley deals with the subject of education, and at the same time makes proper reference to that quality of discipline which, as suggested above, is regarded as of definite importance to the healthy up-bringing of a child:

"It may justly be questioned whether the whole system of education at the present day does not err on the side of dangerous indulgence. No doubt such harshness and neglect as might be likely to repress cruelly a child's feelings and to drive it

to take refuge in morbid broodings, or in vague and visionary fancies, would be a great wrong, but a foolish indulgence, through which it never has infixed in its nature the important lessons of renunciation and self-control, is not less pernicious. Can it be wondered that persons whose minds, when they are young, have never been trained to bear any unwelcome burden, should break down easily into insanity under the strain of severe trials in later life? The aim of early education ought to be sound intellectual and moral discipline rather than much learning of any sort; to fill a child's mind with details of knowledge in order to make it a prodigy of learning is likely enough to prepare for it an early death or an imbecile manhood; but nothing can be better than the careful fashioning of its intellect into a trained instrument by which knowledge may be acquired readily, and with habits of accuracy, and the formation of a stable character, which, through the constant practice of self-denial, obedience, self-control, shall embody those lessons of good moral experience which the events of later life will not fail to enforce rudely."

We are certainly a people of paradoxes. Just as it is our custom to attend most carefully to the breeding of our domestic animals while giving no concern to the parentage of future generations of the human race, so we cautiously exclude the physically unfit from our military organizations, grade gymnastics to the capacity of the individual for muscular effort, and give much heed to the prevention of too great physical exertion, while we place no safeguards upon mental health, set a practically uniform standard of education for the most heterogenous imaginable lot of children, and take practically no account of varying intellectual capabilities. There does seem to be reason for a change in our educational system. Either a readjustment to a standard which the average child is capable of reaching, or more thorough differentiation of those who should and those who should not receive an advanced education, would appear to be indicated. Something in the way of rational medical inspection of schools might easily be arranged, and prove to be a most profitable innovation, not only by the prevention and control of ordinary diseases, but also by the limitation of mental disorders, and possibly the reversal of the present awesome tendency to a rapid increase in the occurrence of insanity.

The question of education must also be considered in connection with the problems of heredity. A parent whose general health has suffered because of too close application to over-

taxing study is just as apt to procreate a child predisposed to mental disorder as is a parent who has sinned in the more patent and doubtless more reprehensible way of intemperance in drink. But then anything which acts as an overstraining influence during the years of reproductiveness, and more especially the strenuousness of the life required in these days, when combined—as it so often is—with free resort to drug stimulation, is to be regarded as a factor which threatens mental deficiency in the offspring. We are making material progress as a nation just now, and in our prosperity we are spending with a profligate hand, with little thought of the day of reckoning. Could we but read aright the lesson so persistently being taught us, showing how rigid is the enforcement of the law which promises visitation of the iniquity of the fathers upon the children unto the third and fourth generation, there would surely be amendment of our methods of living, even in ways which the theologians dream not of. And that it would be for our national welfare there can be no doubt.

THE MILK SUPPLY AND ITS CONTROL

By J. W. DANIEL, M. D., M. P.

St. John, N. B.

(Read before the St. John Medical Society and published at their request.)

I HAVE chosen the Milk Supply and its Control as my subject this evening, because it is eliciting widespread interest, not only here, but in all the important cities of Canada and the United States; because I had the privilege of hearing the matter fully discussed in the Public Health Section of the British Medical Association meeting, lately held at Toronto, by men who are experts on the subject; and also because the Local Board of Health of this city, of which I am a member, have for some time been exercising a control in this matter in the interest of the public health, and have, I think, succeeded in obtaining the co-operation of those whose business it is to supply milk to the consumers in this city. I had the pleasure and advantage at the Toronto meeting of hearing the papers read by Prof. Glaister, of the Glasgow University, Scotland, of Prof. Harcourt, of the Ontario Agricultural College, Guelph, of Dr. Patton of Norwich, England, and the discussion thereon. At the Toronto meeting the readers of papers were confined to fifteen minutes, and I intend to follow their example in that respect as nearly as possible.

Milk is probably the most important article of diet we have. It is a necessity for the young and for the invalid, and its food value is so great that it may be said to contain all the ingredients necessary for growth and the maintenance of life and energy. It is palatable, generally easy of digestion, and it is not expensive.

It has also serious disadvantages. It is a very good culture medium for bacteria, and takes readily from the air of its surroundings unpleasant odours and bacteria, with which it may be contaminated. So also it will receive a taste according to the nature of the food on which the cow is fed. Under the ordinary conditions of milking it will contain hairs and scales and dust from the body and udder of the cow, and even dried particles of manure, and if left standing exposed in stable till milking is completed is still further contaminated from the air of the stable.

Milk that has been drawn under strictly sanitary conditions will contain only a few hundred bacteria to the cubic centimeter. It has been drawn so pure that at the end of 24 hours less than 100 bacteria per c.c were present in a case in which every sanitary precaution was taken. This was done in a disinfected room, and the cows were taken to the milker.

Under ordinary conditions, with reasonably clean cows in a clean stable and the milk kept at a low temperature, it should not contain more than 5,000 to 20,000 bacteria per c.c. But under usual conditions it will contain 50,000 per c.c., and if temperature is raised or the milk be old

the percentage may rise as high as several hundreds of thousands or even millions per cubic centimeter.

A good average milk will contain

Water		87.17
Fat		3.69
Albumen	0.53	9.14
Casein	3.02	
Sugar	4.88	
Ash	0.17	
		100.00

From the above it will be seen that there is good reason for the supervision of the supply of an article of food that is so essential to the lives and health of a large part of the population, and one which at the same time, if not treated in the most careful manner in all the handling it receives from the time it is yielded by the cow till it is on the table of the consumer, may become the means of carrying disease and death to those who partake of it, and all the more because we know that very generally there is little care exercised to have the udders and teats of the cow cleansed before milking, and the clothing and hands of the milker really clean.

Milk may carry or propagate enteric fever, scarlet fever, diphtheria, epidemic diarrhœa, sore throat, tuberculosis. Of these some have their origin in the cow, and others outside of the cow. Among the former are tuberculosis, epidemic diarrhœa and epidemic sore throat, and among the latter enteric fever, scarlet fever and diphtheria.

Some years ago, at a place called Hendon, in England, there was a disease very much like scarlet fever and with identical symptoms, spread by the use of certain milk, and it obtained the name of the Hendon disease. Of this Prof. Glaister said that it did not appear to him that the so-called Hendon disease and one or two more recently recorded incidents prove the existence in the cow of a disease communicable to man exactly similar to scarlet fever.

It is also still a moot question whether diphtheria exists as a constitutional affection of cows. Some observers claim to have found its organism in milk.

With regard to tuberculosis, the Royal Commission on Tuberculosis a few years ago stated that the bacilli of tubercle would only be found in milk when the udder of the cow was diseased, and it has not since been shown beyond doubt that the milk of a cow which reacts to the tuberculin test, but whose udder is free from tuberculous disease, contains tubercule bacilli.

Outbreaks of epidemic sore throat have been traced to milk. In these cases the cause may be found in a contagious mammitis or inflammation of the udder, but which is really a constitutional affection reaching the udder through the milk ducts. It is a streptococcal infection.

Prof. Glaister related a case he had recently investigated where this disease existed in a town cowshed for over a year; the animals being infected one after another. On examination the milk contained certain streptococci in great numbers, that proved fatal to guinea pigs.

From sources outside of the cow, milk may be contaminated in such a way as to communicate enteric fever, scarlet fever and diphtheria.

Milk may become contaminated by having added to it water containing bacillus typhosus, either for purposes of watering the milk or from some of such water remaining in can after being washed, or by contamination by dust during transit; while scarlet fever and diphtheria may contaminate milk that is handled by those who are suffering from these diseases, or have been in recent contact with those suffering from them, or is stored in a house or room exposed to air infected by these diseases.

The sources of contamination of milk from the animal which produces it to the person consuming it may be mentioned as follows: "Milking place, cow, hands and clothing of milker, milking pail, mixing vessels, hands and clothing of mixers, place of mixing, carts, transit vessels, railway depot, cars, boats, milk dealers' vehicles, milk shops, open counter-vessels, milk cans, milk carrier, dust of shops, street or home, and infant feeding bottle."

It will thus be seen that in order to get a pure article of milk it is necessary to see that a great many operations are performed in a cleanly and sanitary manner, and that a great many operators who handle the milk in various ways take all the precautions which are absolutely necessary, if we are to get pure milk. It will also be seen what a difficult problem the sanitarian has to handle to obtain the best results.

The consumer has a right to demand that the milk shall be clean; that it will keep at least 24 hours after being received if kept at 60 degrees or lower; that the flavor be not injured by improper feeding or handling; that it contain no disease germs or any form of preservative; and that it have its proper proportion of butter fat.

" In order that milk may conform to these requirements it is essential that the cows be healthy; that they get good food and water; that they be kept out of the filth of a dirty barnyard; that they be stabled in a clean, well-lighted and ventilated barn. It is imperative that the udders be cleansed before milking, and that every care be taken to prevent dirt and dust of all kinds from geting into the milk. As soon as the milk is drawn it should be removed from the stable to a milk room, which must be some distance from the barn and so arranged that it can be easily cleaned and disinfected; there the milk should be aerated and cooled to 40 degrees F. If it is to be bottled for direct delivery it should be done at once and kept at a low temperature until delivered. All utensils, cans, bottles should be cleansed and sterilized."—(Harcourt.)

Milk in this country is sold by measure, and thus the man who sells poor milk gets just as much as the man who sells good milk. It is all milk anyway, is the thought of the average consumer, if he gives the matter a thought at all. Good milk rich in butter fat and other solids

costs more to produce than poor milk, and the man who provides it is entitled to a higher price than the man who sells the inferior article. The public, either through ignorance or indifference, is responsible for this condition of things very largely, and it will not be radically changed until more interest is taken in this very important matter by people generally and especially by the mothers in the land. So, too, a very great improvement would be soon apparent if frequent examinations of milk were made by inspectors and the results published. Examinations are at present made occasionally by the officials of the Inland Revenue Department, but the results are not made sufficiently public to be of general service.

Prof. Glaister favours the milking machine in preference to hand milking. He said: "From close observation during many years of the operation of milking in various places by hand and mechanical milking machines, I have become entirely converted to the advocacy of the milking machine. Milk thus obtained is never touched by hand until it reaches the consumer, and from experiments made such milk remains longer unacted upon by 'souring' organisms. Moreover, such milking machines can be rendered sterile in the intervals of use."

One great cause of difficulty in the handling of milk for city use, where it comes from very many farms or sources of supply, is the matter of cleaning the cans. Anyone who will take the trouble to put his nose to a milk can that is being sent back to the farm without being cleaned, will be astonished at the disgusting stench which will greet his olfactories. Bottles and cans that have contained milk should be cleansed as soon as emptied if possible. At all events they might be filled with water as soon as emptied if it was inconvenient to cleanse them at the time, and this would make the cleaning process easier when it is undertaken. All cans and bottles should be preferably sterilized by steam, after being thoroughly rinsed with hot soda solution, and this had better be done at some central depot provided with the proper apparatus.

As a member of the Board of Health of this city, which Board has been endeavouring for some time to control the milk supply in the interests of health, and has passed certain regulations which it insists on being carried out, it was very gratifying to find by the discussion at B. M. A. meeting that our methods are quite up to date and in advance of most places. In fact the system recommended was the one we have adopted, viz., licensing the vendors of milk. In this city no one can now sell milk without a license, and the licensee undertakes to carry out faithfully all the regulations imposed by the Board.

In St. John 65 licenses have been issued, which control no less than 115 heads of dairy cattle, while 18 licenses have been issued to persons owning one and two cows. In addition there have been issued 124 permits to store keepers having milk for sale, and it is expected when all are brought under the law that there will be about 100 more.

The authority of the Board does not extend beyond the boundaries of the county, therefore we cannot make regulations as to the precautions to be observed at the time of milking, as to the cleanliness of the cow, and of the persons and clothing of the milker, as most of the milk used here is brought from other counties. The Board ought to have an inspector who could give his time to this work, visiting all the farms where milk is produced, watching and reporting upon the manner in which the milking is done, the cleanliness or otherwise of the cattle, and the barns they are in, the source and condition of the water supply, the condition of barns as to ventilation and light, etc. He should also visit all the places where milk is sold and see that the regulations are properly carried out. He should also take frequent samples of milk and have it examined for conditions of cleanliness and purity, and obtain the proportion of butter fat and other solids. We have at present no such inspector on account of lack of means, but we utilize the help we have, and have had our officer visit many of the farms in King's county and report on their condition. We believe these visits have already had the effect of improving the milk supply and of educating some of the farmers to the great importance, and indeed the necessity, of carrying out those sanitary precautions which the health authorities consider indispensable, if they wish longer to supply this city with milk. By steady perseverance in these methods, and being supported by a strong public sentiment in favour of pure milk, and the precautions necessary to produce it, I think we shall succeed in getting a satisfactory supply.

The following are the Regulations for the Sale of Milk in the City of Saint John:

Under the authority of the Public Health Act of 1898, the following Regulations with regard to the Sale of Milk have been adopted by the Local Board of Health of the City and County of Saint John:

1. No person shall sell, or offer for sale, milk in the City of Saint John without having first procured a license so to do from the Local Board of Health.

2. Every license to sell milk within the City of Saint John shall be subject to the condition that the licensee shall and will observe, abide by and perform all the restrictions, conditions and regulations from time to time adopted or enacted by the Local Board of Health during the currency of said license or any renewal thereof, and upon the said licensee failing to observe, comply with or perform any of such restrictions, conditions or regulations the license granted to such vendor of milk shall forthwith become null and void.

3. Every licensed vendor of milk offering milk for sale in the City of Saint John shall at least once a year deliver to the Board of Health a statement containing (1) his name and address (2) The source or sources of his milk supply. (3) The number of cows in his possession. (4) The average quantity of milk disposed of either (A) to milk shops; (B) to milk vendors;

(C) or to private customers. (5) The situation of his dairy or dairies, and such other information as the Board or its officers may deem necessary.

4. Every licensed vendor of milk shall comply with the various clauses of the Public Health Act, by giving notice to the Local Board of any cases of contagious or infectious diseases in his family or in the farm house or shop at which, from which, or in which the milk is either sent or received, and he shall further carry out the restrictions laid upon him by the Local Board under the Public Health Act.

5. No licensed milk vendor shall sell or offer for sale in the City of Saint John any milk which is unwholesome or unfit for human food, or any milk which has been adulterated, or has been reduced or changed by the addition of water, or other substance, or by the removal of cream, or milk known as swill milk, or milk from cows or other animals fed upon garbage or other like substance, or milk from diseased animals, but skimmed milk may be sold as such if contained in vessels or cans bearing upon the exterior the word "skimmed" placed conspicuously in letters not less than two inches in length, and no person shall supply such skimmed milk unless such quality of milk is asked for by purchaser.

6. Every licensed milk vendor shall permit all his milch cows and cow byres, and all dairies and other places in which milk is sold or kept, to be inspected by the Health Officers, or person or persons appointed for that purpose by the Board of Health, whenever such officers may desire to do so, and no licensed vendor of milk shall keep any milk intended for sale, or which may be afterwards sold or offered for sale in the said City in any place where such milk is likely to become unwholesome, or liable to produce disease, either by reason of adulteration, contamination with sewage, absorption of disease germs, infection of cows, uncleanliness, or any other recognized cause, nor in any place condemned by the Board or its authorized official, nor carry it in any wagon or vehicle used for the conveyance of swill, manure, or any other offensive material.

7. Every licensed vendor of milk shall have the number of his license conspicuously placed on the wagon or vehicle from which the milk is sold, and every can or vessel from which it is sold when no vehicle is used.

8. Every dairyman and vendor of milk, and every driver of milk wagons or vehicles, having in his possession in the City of Saint John milk for sale in the said City at the time, shall whenever so requested furnish the Inspector of the Board with such samples of milk as he may require from time to time, and at such places as the samples may be demanded.

9. Every sample of milk shall have a label attached to the vessel containing it, which shall have written thereon at the time of collecting it, the number of sample, date of collection and initials of the Officer or Inspector receiving the same, who shall at once enter in a book (carried for this purpose) for further reference, a corres-

ponding number with the name of the owner or driver from whom the said sample was obtained.

10. Each sample shall be examined separately, according to its number, by the Medical Health Officer, or person appointed for the purpose, who shall register the specific gravity, temperature and percentage of butter fat, and other information bearing on the purity or otherwise of the milk, opposite a corresponding number in a book kept for that purpose, the names of the owners to be subsequently inserted.

11. The Health Officers and Sanitary Inspectors are authorized and required to inspect as often as to them or any of them may seem necessary, all milk offered for sale, whether on any of the streets, public places or shops of the said City, and to seize and destroy all such milk which may on such inspection be found unwholesome or unfit for human food.

12. That vendors of milk shall at least once a year furnish the Board, or the Secretary thereof, with a certificate in writing from a duly qualified veterinary surgeon, that all cows from which the milk is obtained which is offered for sale, are free from disease.

13. That persons offering milk for sale in grocery or other shops in the City of Saint John are required to obtain a permit so to do, from the Board of Health. That they keep such milk in earthenware vessels, properly covered and perfectly clean, to the satisfaction of the Board of Health or its officials.

14. Railway cars and other carriages and conveyances used for conveying or delivering milk within the City of Saint John must be kept properly cleansed. No one shall receive, purchase, sell, or offer for sale within said City milk from a car, carriage, or conveyance not kept so cleansed.

15. No one shall receive, purchase, sell, or offer to sell within said City milk from a house or farm, in which there is, or recently has been, any case of contagious or infectious disease, or milk which has been handled by any person who is, or has recently been exposed to, or who lives in a house in which there is, or recently has been, a case of any contagious or infectious disease.

16. Milk shall not be kept, or any dairy maintained, within said City in a building used, or a portion of which is used, as a stable or fowl house, or in any building, the sewer of which is defective, or the sewerage or drainage of which is not considered satisfactory by this Board.

17. Every licensed vendor in milk, before returning or delivering any can or other vessel for holding milk to any railway or other transporting agency for the purpose of having the same refilled, shall sterilize such can or vessel with boiling water or steam, and shall otherwise thoroughly cleanse the same.

18. Any person who shall wilfully violate any of the foregoing Regulations, or who neglects or refuses to comply with such Regulations, shall be liable for every such offence to the

penalty not exceeding forty dollars, as provided by the Public Health Act 1898.

We are only at the commencement of this crusade, and we have not got as far as we have without a great deal of work, a great deal of tact and a great deal of firmness. It is always difficult to inaugurate a new system in health matters, in bringing people under regulation who have hitherto been a law to themselves, but by tact and firmness I think the dealers themselves are recognizing the wisdom of the regulations and the necessity of the care insisted on. This has been the more easy of accomplishment since finding an epidemic of typhoid followed the rounds of one dealer; we were able to demonstrate the presence of typhoid bacilli in a portion of his milk, and thus give the dealers an argument they could not resist.

One of our greatest difficulties was in getting the dealers to carry out Sec. 17, which requires the milk cans to be cleansed and sterilized before they are returned to the farms; they perhaps not unnaturally thinking that this should be done by the farmers. They have, however, acquiesced in this very necessary regulation and are carrying it out.

The whole subject is one of the utmost importance, and if people generally will take an interest in it, and insist on getting clean milk having the proper proportion of butter fat, I believe they will get it, and the dealer who supplies the best milk will get the best price.

TREATMENT OF LOBAR PNEUMONIA

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(Read before Maritime Medical Association, Charlottetown, July, 1906.)

THE subject of this paper will probably be regarded as an interesting one, so much having been said and written upon it without producing any form of treatment that has appeared to modify, much, the course of pneumonia. More than one has mentally summed up the position with the thought: "We trust in the future."

Yet we cannot rest content with the present state of things. Osler calls pneumonia the "Captain of the Men of Death," and says it outranks consumption as a cause of death. At the Johns Hopkins Hospital the death rate in pneumonia is about 1 in 4. Of course many of these cases come to hospital only when the disease is far advanced and from most unfavourable surroundings. The *Journal of the American Medical Association*, in an editorial, quotes Dr. E. F. Wills' statistics published in 1902, in which it was shown that the mortality from pneumonia was 18.1 per cent. This was based on a study of 233,730 cases.

Personally, I have, in the past, found the different methods of treatment of little avail in influencing the disease, but I now desire to give first place to the treatment advocated by Dr. W. J Galbraith, chief surgeon of the Cananea Consolidated Copper Company, Cananea, Mexico. It is set forth in an article by him in the *Journal of the American Medical Association*, of February 10th, 1906. It is based on the view that quinine in sufficient doses acts as an antitoxin in pneumonia, destroying the micro-organisms and their products which produce sepsis.

As long ago as 1884, when I was an interne in the hospital, an old man not expected to recover from pneumonia, was given, by the mistake of a nurse, large doses of quinine and iron intended for a case of erysipelas, and the man recovered. I felt at the time that the recovery was more than a coincidence. I had been taught by my teacher in medicine, one of the greatest physicians of America, the late Professor Alfred L. Loomis, to value quinine in this disease. He wrote in 1881 as follows: "In the sulphate of quinine I believe we have a true antipyretic; it has been claimed that this remedy is an arterial sedative. By its action on the nervous system it increases the power of the heart's action. On this principle, for the past four years my rule of practice has been to place all patients with pneumonia of a severe type on the sulphate of quinine, in doses varying from twenty to thirty grains per day, and it is the exception for a pneumonia patient not to show a marked reduction of temperature within thirty-six

hours after the commencement of its use. It does not seem to arrest the progress of the pneumonia, but it lowers temperature, shortens the duration of the febrile stage, and hastens the stage of resolution to complete recovery." It will be seen that Dr. Galbraith endorses these views, but by doses three times as great he is able to go farther than these statements.

I may here, then, mention the principles, method of treatment and results of Dr. Galbraith, as briefly as possible, for those who have not read his articles on the subject. It appears that the doctor has advocated his treatment in the *Journal of the American Medical Association* on two occasions before this last article, namely, on July 9th, 1904, and January 28th, 1905. The last paper consists of extracts from a lecture recently delivered to the New York Polyclinic, and it is sketchy and incomplete in form.

"Pneumonia," he writes, "is a septic febrile disease, characterized by an early inflammatory attack on the lung tissue and frequently followed (by the action of its toxins) by complications that mechanically interfere with the function of the heart, and chemically change the condition of the blood to such an extent that even those who are fortified by unusual vigor frequently perish. Its etiology is the presence or absorption of pyogenic germs, whose rapid development is produced by a propagating bed, due to the influence of a sudden reduction in surface temperature, in which reduction, alcohol, cold and wet weather are frequent factors." He takes issue with these who rely on an expectant plan of treatment and considers that by other measures than those he advocates physicians are powerless to lessen or modify the course of pneumonia. He claims for his own antitoxin method that it first produces an improvement in the pulse. Instead of the usual high tension the tension becomes normal. This observation corresponds with that of Dr. Loomis. The improvement in the pulse is followed by a drop in the temperature and respiration. He urges that the keynote and foundation of the principles that commend his treatment is that it prevents the manifestation of septicæmia. It removes bacterial poisoning. If there is a medicine that will produce specific results it is quinine and iron in pneumonia. He considers the use of stimulants (strychnine and alcohol) in the active stage dangerous. He claims that the treatment by his method secures relief of pain and comfort within 24 hours.

Dr. Galbraith reports that the mortality from pneumonia among his patients used, before he began his present method, to be 75 per cent., and now it is less than 2 per cent. The former percentage appears to be very high, but Osler states that the mortality from pneumonia is greater in southern climates. Dr. A. L. Gustetter, also, of Nogales, Arizona, reports that his mortality in this disease was formerly 80 per cent. Under the new treatment Dr. Galbraith has had fifty cases without a death, and Dr. Gustetter had not had a death up to the time of reporting, and he has treated thirty cases.

For those who have not read Dr. Galbraith's article, I will give his method of treatment so far as he has stated it. On admission to hospital the pneumonia patient is first given a warm bath and then a brisk calomel purge is administered, or one of phosphate of soda. In from one to three hours after, a dose of quinine is given corresponding to the height of the fever. If it range to 105 degrees or above, then from 60 to 70 grains are given as the initial dose. If the fever is between 103 and 104 then from 40 to 50 grains, but never less, as an initial dose. Within four hours after this from 10 to 15 drops of the tincture of the chloride of iron are given and this dose is repeated every two to six hours, depending upon the condition of the pulse. As to the repetition of the quinine, if the temperature rise to 101 or 102 after it has reached the normal he administers from 40 to 50 grains of quinine at one dose. Dr. Galbraith urges that there should be no compromise in the giving of the quinine by dividing the dose. He protests that it would be just as unfair to blame the antiseptic system of surgery for want of success, when no further exactness was followed than adding a little carbolic acid to some water and washing the hands, as it would be to blame this system of treating pneumonia if only half measures are employed.

Dr. Galbraith does not use any local application, as poultices, and in a letter to me he says he dresses his patients in as light weight clothing as he possibly can. He also says thorough ventilation, and flushing of the kidneys with an alkaline water are of the utmost importance. He also informs me that he, as a rule, administers the quinine in wafers, and the chloride of iron in a syrup mixture. In answer to the question as to unfavourable symptoms produced by such large doses of quinine, he says that with the exception of a slight ringing in the ears in two or three cases only, not an unfavourable symptom has ever been reported.

Following Dr. Galbraith's article he publishes reports of fifteen cases sent to him by five physicians. Of these, five cases are from Dr. A. L. Gustetter, Acting Assistant Surgeon U. S. Public Health and Marine Hospital Service, Nogales. Dr. Gustetter states that he believes that in quinine and iron we have a specific in pneumonia, but as to the question of the dose of quinine it must depend on the severity of the general symptoms, age and especially the length of time the disease has progressed. In his experience with children he has observed that they stand quinine, in doses proportionate to their age, as well as adults. Then follow three cases from Dr. Dudley, three cases from Dr. Haney, and two cases from Dr. Carpenter, all showing most favourable results from the method of treatment.

Besides Dr. Galbraith's paper and the cases just referred to, there have been, so far as I have seen, ten articles on the quinine treatment of pneumonia during the last year in the *Journal of the American Medical Association*. The first was a reference from

the Virginia *Medical Semi-Monthly*, in which Dr. E. T. Ramsay is quoted as favouring this method of treatment in its entirety. He usually orders 30 grains of quinine repeated in an hour and again in some cases in two hours depending on the amount of fever and condition of the patient. When rusty sputum is profuse, he also gives one grain capsules of acetate of lead.

The second article consists of case reports by Chas. F. Nieder, Geneva, N. Y. He reports having treated 6 patients with lobar pneumonia after Dr. Galbraith's method, with very satisfactory results in every case. The six cases are given. He stated he wished to emphasize most, the effect of the treatment on the circulation, instead of the usual high-tension pulse, a pulse of nearly normal tension and good volume.

The third reference is a letter from Dr. J. B. Cutter, surgeon in charge of Santa Fe Coast Line Hospital. In it he somewhat disputes Dr. Galbraith's claim to be the first to use this treatment, it having been used in 1894 to his knowledge; also expressing the opinion that the measure should not be put forth as a matter of routine, though he believed many patients in the first stage are greatly benefited and it may abort a case.

Then on March 17th of this year (1906) follows an editorial, the general verdict of which appears to be "not proven." It expreses much interest in the quinine treatment, but says it is not new, Juergensen having advocated it in Ziemssen's Cyclopedia thirty years ago, referring to the self-limitation of the disease and the many recoveries if let alone, and urging very careful accuracy in the diagnosis, and also on results based on a large number of cases. A second editorial on the subject appears on March 24th, somewhat retracting the critical tone of the first.

In the March 17th number there is a short article from Dr. Mansfield of Ashland, Nebraska, drawing attention to the classic article of Prof. Juergensen, in the *Cyclopedia of the Practice of Medicine*, published in 1875, advocating 77 grains of quinine in pneumonia for a strong adult. Dr. Mansfield advocates a return to this classic. Also in the same number is a letter from Dr. A. L. Gustetter, some of whose cases have been reported before. In this paper he states that since the report of his cases in Dr. Galbraith's article, he has had many other cases of pneumonia and his mortality of 80 per cent. has been reduced so far to zero. He cites four more cases, all the cases having been treated by Dr. Galbraith's method.

In the March 24th number there is a letter from R. F. Erdman, M.D., of New Richmond, Ohio, reporting that he had, following the Juergensen article in 1872, used the quinine treatment for two years, giving from 25 to 40 grains at one dose, or he divided the dose into three or four equal portions. He found that the treatment did not influence the course of pneumonia, either favourably or otherwise, and it was often followed by unpleasant symptoms of cinchonism, so that he desisted.

The ninth reference is a letter from Dr. Norman Cox, of Baltimore, saying that since reading Dr. Galbraith's article he had used the treatment in half a dozen cases, and it had given charming results. He would rather have a case of pneumonia than a case of malarial fever, for he knew that he had a specific.

The last reference to the use of quinine in pneumonia is in a comprehensive article on the treatment of this disease by E. Russell Zemp, M.D., Professor of Therapeutics, Tennessee Medical College, in which he says: "Perhaps the nearest approach to a specific treatment of pneumonia is the hypodermic injection of quinine. This treatment receives the endorsement of no less an authority than Nothnagel. Muriate of quinine, 7½ grains, are dissolved in one-half ounce of sterile water. This is injected once daily into the lateral parts of the abdomen, where the cellular tissue is loose. Generally two or three injections suffice. The effect on the temperature is less than on the general condition. It gives one the impression that the quinine lessens the effect of the products of the bacteria."

When so many therapeutic remedies are being put forward only to prove to be failures, I do not wish to advocate a remedy without being myself convinced of its efficacy. I believe with the great majority whom I have quoted, who have written on this subject, that, in the words of Loomis, quinine lowers temperature, is an arterial sedative, shortens the duration of the febrile stage and hastens the stage of resolution. But I am further induced to believe that in the large doses advocated by Dr. Galbraith it acts as a specific—as much of a specific as the antitoxin is in diphtheria. It will be noted that those who formerly followed the Juergensen treatment did not give the immediate initial dose of from 40 to 70 grains called for by Dr. Galbraith. They used half measures. Yet in all the cases I have seen reported there is only one case mentioned in which there were any symptoms of quinine poisoning. In this case there was profound deafness and almost complete blindness. The case is reported by Dr. Gustetter, who attributes the condition to a cumulative action from the use of quinine in pill form which he strongly deprecates. Both the symptoms passed off within ten or twelve hours.

My own experience with the treatment, following Dr. Galbraith's methods, number four cases, three in the Victoria General Hospital and one in private practice in the country. These cases I wish to submit to this society. I may say that the giving of 50 grains of quinine at one dose to a patient appeared at first like heroic treatment, and more than once my house surgeon, after taking down my prescription, handed it to me to be initialed so as to be relieved of any personal r sponsibility in the matter. The result hardly showed as much discomfort from fifty grains of quinine as from ten. The coloured girl, Annie T., in the second case, was not even a little deaf. The case in which there was most deafness was the last one cited, Case IV., and I feel that I bungled the

treatment of this case from unnecessary timidity. I gave only 7½ grains of quinine every four hours at first and it was not till a double pneumonia set in on the 8th day that I proceeded to give 30 grains at once, 72 grains in 24 hours. This was late for a specific treatment to be effective. We are told that the dose should be larger when given late in the course of the disease." I should perhaps have given a larger dose. But the patient being far away without a trained nurse and the treatment new was the reason of my hesitation. In all the cases I should have given larger doses.

As to the method of giving so large a dose, I found that, if given in several konseals, the quinine could be taken without inconvenience or, in one case, suspended in milk. In none of the cases did the stomach fail to retain it.

The three hospital cases are reported by Dr. Cliff. Goodwin, of the interne staff of the Victoria General Hospital.

The four cases cited from my own experience prove the safety of the method of the treatment. The total number of cases referred to is not large enough to prove the efficacy of the treatment, but it is large enough, in my judgment, to indicate that the method should be further tried by all members of the profession in cases of lobar pneumonia.

NOTES, NOVEMBER, 1906—I think the earlier the treatment is begun the more marked is the result.

In a second letter just received from Dr. Galbraith, he reports over three hundred cases of pneumonia treated by his method, with a mortality of about two per cent.

Case Reports.

CASE 1.—Walter J., age 28 (colored), Hammond's Plains, Halifax County.

On March 7th (Wednesday), the patient took a chill while working in a saw mill, the cold chills ran all over him and he had to leave his work and go home to bed. After some time he thinks he must have had a very high fever, for he felt as if he were burning up. Pain in the right side began shortly after the chill, of a sharp and stabbing nature, especially when a long breath was taken. This continued to increase in intensity. Cough began at the same time as the pain, with some expectoration of blood.

March 8th.—Headache severe, pains in the limbs and back, and he felt very thirsty and weak.

March 9th.—He came to the hospital and was examined by Dr. Smith. Fairly well nourished man. Appetite poor, tongue heavily coated with a yellowish fur and clean on the edges.

CHEST INSPECTION.

Respiration short, shallow and panting.

Palpation.—Fremitus increased in right base and anteriorly in right apex.

Percussion.—Dullness in right base beginning 1 inch above lower angle of the right scapula.

Ascultation. — Respiratory murmur feeble and high pitched, with fine crepitant rales at base. Left lung appears normal.

Pulse, 110; temperature, 104.5; respiration, 48.

He was given quinine sulphate 50 grains at 3 p. m., suspended in milk, to be repeated in doses of 30 grains after 3 hours if temperature was above 102.

At 6 p. m. his pulse was 98, temperature 101.3, respiration 40.

March 10th.—Patient feeling much better this morning, has complained of very little buzzing in ears. Pulse 70, temperature 101, respiration 32, and pain in side not so bad.

March 11th.—Patient still continues to improve. His pulse this morning was 60, temperature 99.5, respiration 34; feels quite comfortable. No pain in side, not much cough, appetite coming back, and at 9 a. m. his temperature was normal.

And thus the patient continued to improve, shown by 3 hour chart, which was omitted on March 19th, 1906.

Besides quinine treatment all this patient had was a laxative.

Case 2.—Annie T., age 17, Halifax, N. S.

On March 29th got her feet wet and contracted a severe cold, she says. She was admitted on April 1st, complaining of the usual symptoms of pneumonia—pain in side, sore limbs and back, etc. Breathing rapid with respirations from 30 to 50 and a good deal of cough which gives her great pain. Applied mustard plasters to side.

Examined by Dr. Smith.

April 2nd.—On the morning of April 2nd temperature 103.8, pulse 110, respiration 52.

April 5th.—Some dullness on percussion all over right lung. Respiratory murmur slightly diminished. Respiration prolonged in right apex. Vocal fremitus increased and great number of adventitious sounds. Posteriorly, bronchophony on right inter- and supra-scapular regions. Also slight involvement of left base.

She was given quinine sulphate 40 grains at 12 o'clock. At 3 o'clock her temperature was 102, pulse 90, respiration 45, and at 9 p. m. temperature 98.5, pulse 90, respiration 30.

April 3rd.—Temperature went up again to 103 and dose was repeated, which brought it back to 98.5 in the evening, and the patient seemed much easier.

April 4th.—Patient has only had a slight buzzing in ears, and though she has complained of severe headache up till now, today the headache does not bother her.

On April 4th and 5th doses were repeated of 30 grains each, and on the 6th temperature went up for the last time to 102.8, according to three hour chart, bringing a crisis on the 6th day after the beginning of the disease, for the girl said she had no fever before Sunday morning, April 1st, and only complained of a cold. She continued to improve, and on the 15th she was allowed out of bed.

April 19th she was discharged recovered.

Case 3.—Willie G., age 16, 40 Wellington Street, Halifax N. S.

Was admitted to hospital on June 2nd, in an unconscious state. He was sent first to surgical ward and next morning came down to medical ward with the diagnosis of pneumonia.

Visited by Dr. Smith on the

3rd, who ordered dose 48 gr. of quinine at 12 p. m., and a three hour chart. Temperature then 104.8, pulse 98, respiration 30. At 9 p. m. temperature was 99, pulse 82, respiration 38.

JUNE 4th.—His temperature this morning was up to 104.8 pulse 96, respiration 38. He was given 18 gr. of quinine at once and after that every 3 hours 6 gr of quinine and his temperature was 100.2 that night at 6 o'clock.

JUNE 5th.—Some dullness on percussion all over right lung. Respiratory murmur slightly diminished. The scapular region, pectoriloquy.

The 6 gr. doses were kept up every three hours until temp. remained about normal, which was on the 7th day of his admission to hospital.

He was discharged on the 12th day of June recovered.

He complained really more of buzzing in the ears with the 6 gr. doses than he did of the 48 gr. of quinine given at one time.

CASE 4.—Nellie T., Age 19

Case in private practice.

Family history shows that one sister, an aunt and an uncle died of consumption.

On Thursday evening, April 5th, patient tok a severe pain in the left side. I was not called to see her till Sunday, April 8th.

APRIL 8th, Sunday.—I drove three miles into the country to see the patient at her home which was healthy and comfortable. I found the following:

Examination — Temperature 102, pulse 132, respiration 40. Lower lobe of left lung almost flat on percussion. Broncophony breathing laboured and shallow. Sputum pink in colour and tenacious. Patient complaining of severe pain in left side.

Diagnosis.—Pneumonia left lower lobe.

Treatment. — Quinine sulphate 7½ grains every 4 hours and tincture of the chloride of iron, 8 drops every 4 hours. Hot mustard and linseed poultices to left side.

April 9 (Monday).—Temperature 103.2, pulse 120,. respiration 36. Quinine and iron continued in same doses and 1 bottle of Vichy water ordered to be taken daily.

April 10 (Tuesday).—Temperature 102.6, pulse 115, respiration 48. Slight dullness and signs of involvement of right apex. Pain in side continues. Quinine and iron continued and Vichy water.

April 11 (Wednesday).—Temperature 102, pulse 116, respiration 49, breathing rapid, shallow and difficult.

April 12 (Thursday).—Temperature 99, pulse 102, respiration 36 The patient appeared much better, and this being the seventh day of the disease it appeared the crisis had arrived for the better.

April 13 (Friday).—Temperature 102.5, pulse 110, respiration 36. Patient complaining of severe pain on right side. The right base has become involved. Percussion shows marked dullness over whole of right lower lobe and some dullness over right upper lobe. The left base appears to be clearing up. The case is an anxious one.

Treatment.—Quinine 30 grs at once and 12 grains afterwards every four hours as long as temperature continues about 102; 6

grains every four hours in any case. Iron repeated and Vichy water. Poultice to right base. Sputum contains bright red blood.

April 14 (Saturday).—Temperature 102, pulse 116, respiration 36. Patient complains of deafness but not much more than from the 7½ grain doses. Thirty grain dose repeated and then 12 grains every four hours. Patient was now taking 72 grains of quinine in 24 hours.

April 15 (Sunday).—(Tenth day of disease)—Temperature 102.3, pulse 111, respiration, 39. Patient has again taken 72 grains of quinine in 24 hours.

April 16 (Monday).—Temperature 102, pulse 112, respiration 38. No quinine to-day as 72 grains for 24 hours have not been all taken. Bovinine ordered.

April 17 (Tuesday).—Temperature 102.3, pulse 109, respiration 39. Diarrhœa (caused from bovinine); chalk mixture ordered and quinine, 36 grains for next 24 hours.

April 18 (Wednesday).—Temperature normal. Sputum clear.

After this the patient made a good recovery.

SOCIETY MEETINGS.

Halifax and Nova Scotia Branch British Medical Association.

NOVEMBER 21st.—The President, Dr. Ross, in the chair.

After routine business, Dr. Eagar brought forward again the question of "Registration of Births" and moved "that a standing committee of three be appointed by this branch to co-operate with the present committee of the Medical Society of Nova Scotia, with a view to securing legislation along these lines." Motion carried.

The President, Dr. Jas. Ross, presented two cases, the first being one of "hydroa vacciniforme" in a boy aged sixteen years, and was, he said, of interest as a rarity. The second case was a typical "alopecia areata," in a boy of eight years. He then read a paper on "Alopecia Areata," which will be published in a later issue.

Dr. A. McD. Morton, of Bedford, presented a case, with report of same. The patient shown was an elderly man with a history of injury to the left shoulder about eighteen months ago, followed by paralysis of all the muscles supplied by the brachial plexus, in some cases complete, but with a certain amount of motor ability remaining in the left wrist and hand. At present there is great wasting of left arm and shoulder. The reaction of degeneration is present.

Dr. Eagar, in discussing this case, recalled a case of Erb's palsy in an infant in his own experience.

Dr. Hattie considered the lesion in this case to be probably of the nature of a rupture, which however is manifestly incomplete. The lesion is probably situated high up near the spinal column, and all of the roots are probably involved.

Drs. Murphy, Goodwin and Finn also joined in the discussion.

Dr. Morton reported a second case, one of self-mutilation in an old man of 90 years, who in attempting suicide amputated nearly all of his genitals. Complete recovery followed.

December 5th.—Dr. Farrell asked what action the branch should take concerning a proposed medical directory in the *Suburban*. It was decided on motion of Dr. Goodwin, that this branch does not give its approval to any form of advertising by its members.

Dr. Finn gave a most interesting talk on his recent visit to the medical department of Johns Hopkins University.

The tuberculosis discussion was postponed till the next meeting.

CURRENT MEDICAL LITERATURE.

(In order to afford our readers a ready means of learning what new books and new editions are being issued, we propose publishing such lists as follow from time to time. We would be glad if medical publishers would co-operate with us, so that these lists may be made as complete as possible.)

The Prophylaxis and Treatment of Internal Diseases, by F. FORCHHEIMER, M. D., Professor of Theory and Practice of Medicine and Clinical Medicine, Medical College of Ohio, etc., etc. 652 pages. Published by D. APPLETON & COMPANY, New York and London.

This is one of the most useful and practical books that has ever come to our desk. Various internal diseases are classified under twelve heads, and each disease receives full and ample but concise consideration. The author has embodied in the work the results of his experience during thirty years of active life in hospital and private practice, and throughout the book he has aimed at recommending such measures of treatment as are available in private practice. The more modern methods in treatment are given due attention, hydrotherapy, gymnastics, exercises, diet, etc., being fully discussed, but always with a view to their adaptation to private practice.

There is no discussion of the symptomatology or pathology of the various diseases, but under prophylaxis there naturally falls some consideration of the causation. As would be expected, the question of prophylaxis of the several infectious diseases is dealt with in particular detail, and in the case of many of these diseases Dr. Forchheimer's presentation of the matter is singularly clear and succinct. The greater part of the space is given up to treatment, and we have found that the book is well up to date in this particular. The volume is of the greater value because it supplies the defect so noticeable in several recent text-books of medicine, viz., scant reference to treatment, and for this reason it is an admirable supplement to such text-books.

The appendix contains tables showing the composition of various foodstuffs and of liquors containing alcohol, a section on the treatment of poisoning, and a list of drugs with dosage and preferable mode of administration. There is also a list of prescriptions, showing certain combinations of remedies, which have been found of especial value. Altogether the book is an admirable one, and should meet with a most favourable reception by the profession.

We are indebted to Dr. Nicholas Senn, of Chicago, for reprints of his articles on "The Needs and Advantages of an International Congress of Military Surgeons," "First Aid on the Battlefield," "A Plea for the

International Study of Carcinoma," and "The Surgical Clinic of To-day; its Status and Methods of Teaching," and to Dr. L Webster Cox, of Philadelphia, for reprint of his article entitled "Massage, an Occupation for the Blind."

Messrs. P. Blackiston's Son & Co .announce that they will shortly issue a work entitled "Anatomical Terminology: with Special Reference to the Basle Anatomical Nomenclature [BNA], by Lewellys F. Barker, Professor of Medicine, Johns Hopkins University. The advance sheets with which we have been favoured indicate that the work will be of much interest and value.

PERSONALS.

Dr. F. V. Woodbury has begun practice at 112 Argyle Street, this city.

Dr. J. L. Potter, formerly of Glenwood, Nfld., has sailed for London to take up post graduate work.

L. W. Bremerman, A.M., M.D., of New York City, has been appointed Professor of Genito-Urinary Diseases in the New York School of Clinical Medicine, to fill the vacancy caused by the death of Professor William K. Otis, M.D.

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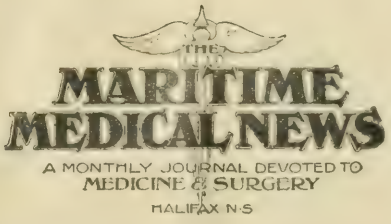

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The Sensible Treatment of La Grippe and Its Sequelæ.

The following suggestions for the treatment of la grippe will not be amiss at this time when there seems to be a prevalence of it and its allied complaints. The patient is usually seen when the fever is present, as the chill, which occasionally ushers in the disease, has generally passed away. First of all the bowels should be opened freely by some saline draught. For the severe headache, pain and general soreness give one antikamnia tablet, or if the pain is very severe, two tablets should be given. Repeat every two or three hours as required. Often a single dose is followed with almost complete relief. If after the fever has subsided, the pain, muscular soreness and nervousness continue, the most desirable medicines to relieve these and to meet the indications for a tonic, are antikamnia and quinine tablets, each containing 2½ grains antikamnia and 2½ grains quinine. One tablet three or four times a day will usually answer every purpose until health is restored. Dr. C. A. Bryce, editor of *The Southern Clinic*, has found much benefit to result from antikamnia and codeine tablets, administered for the relief of all neuroses of the larynx, bronchial as well as the deep seated coughs, which are so often among the most prominent symptoms. In fact, for the troublesome coughs which so frequently follow or hang on after an attack of influenza, and as a winter remedy in the troublesome conditions of the respiratory tract there is no

better relief than one or two antikamnia and codeine tablets slowly dissolved upon the tongue, swallowing the saliva.

HÆMORRHOIDS.

By Elmore Palmer, M. D., Buffalo, N. Y., Ex-President of the Western New York Medical Society.

Without any comment on the nature, causes, varieties or pathological conditions found existing in rectal ailments, I will transcribe from my records two cases of hæmorrhoidal troubles that I have treated within the last two years with Glyco-Thymoline.

Case 1.—Mr. B. O. H., age 29, had been ailing several years with what he called piles. A careful examination revealed the following conditions: On the margin of the anus were three strangulated tumours about the size and colour of a Concord grape. On continued pressure the tumours would empty themselves almost entirely but refill again in the course of an hour. Several similar tumours about the size of a pea were found just inside the sphincter. Anal moisture and pruritus were very troublesome, but singularly enough little pain was complained of. The bowels were

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somewhat constipated. Regulated the diet and secretions, gave an enema of two ounces of a fifty per cent. solution of Glyco-Thymoline every night and morning quite warm, held in until absorbed, and applied same to anus on lamb's wool during the night and as much of the daytime as he could spare from his office. A decided improvement was noted in a week, and three weeks later he was cured. That was nearly two years ago and there has been no trouble since.

CASE 2.—Mrs. R. consulted me regarding "bleeding piles," which had been gradually growing worse for three or four years. At every stool she would bleed two or three tablespoonfuls. She had become quite anæmic. No external tumours. A corroding ulcer as large as a nickel was diagnosed just inside of the internal sphincter. Washed out the rectum three times a day at first with a warm solution of boric acid and then gave an enema of one ounce of Glyco-Thymoline full strength hot, held in until absorbed. A wonderful relief was noted from the first treatment. After four days only two enemas a day were used as no blood was passed. At the end of two weeks' time a careful examination of the rectum showed it to be perfectly normal. She was cured. No return after eight months.

THE TREATMENT OF COUGH.

Cough, regardless of its exciting cause, is a condition that every physician experiences more or less difficulty in relieving While the agents designed for its relief are numberless, it is a matter of common knowledge that but few of them are of general utility for the reason that although they may be capable of effecting relief, in doing so they either derange the stomach, induce constipation, or cause some other undesirable by-effect.

The ideal cough cure must combine sedative and expectorant properties without exhibiting the slightest system-depressant, gastric-disturbing, constipation inducing or palate-offending action. Nor should it contain any ingredient the prolonged use of which would cause a drug-habit. Then too, it must be of sufficient potency to produce the desired effect with the utmost prompt-

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ness, for, in many instances the patient has indulged in self-drugging to a certain extent before consulting the physician; hence, it is directly to the interest of the practitioner to demonstrate his skill by immediately relieving the disturbing condition.

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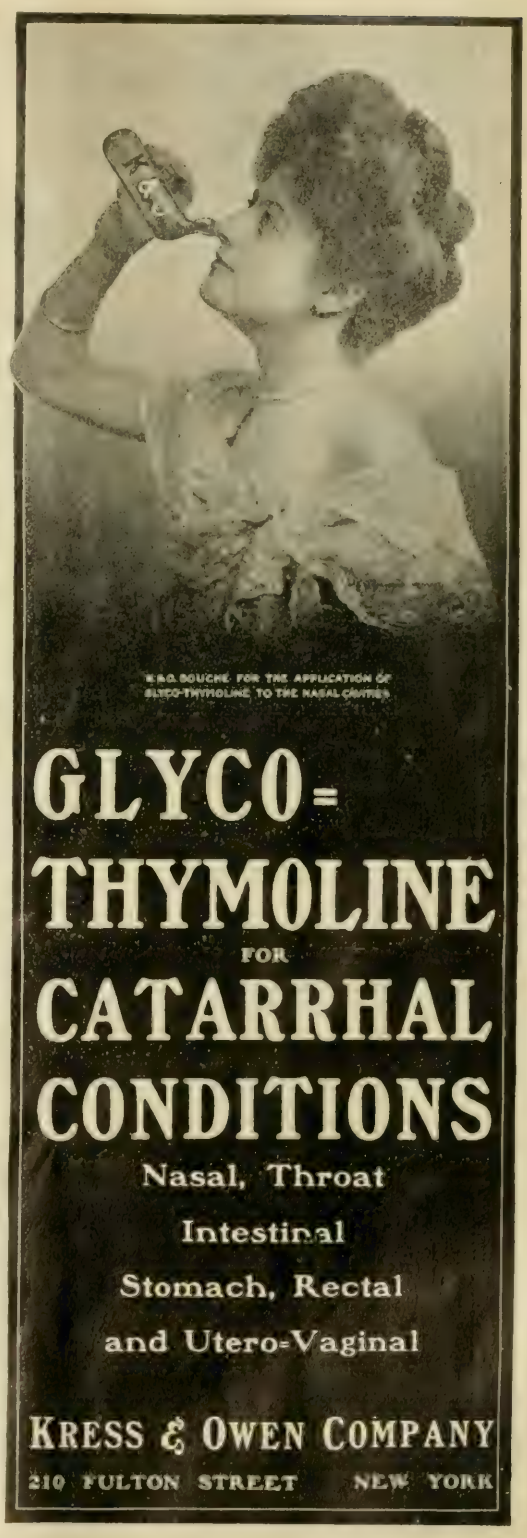
Suggestions in the Treatment of Diseases of the Respiratory Tract.

By J. F. P. Jenkins, Ph. G., M. S., M. D.,
Los Angeles, California.

A marked advance in therapeutics has taken place in the last few years and many new remedies have been introduced which, after careful clinical tests, have been found to be vastly superior to former methods of treatment. A drug which has attracted considerable attention is the new morphine derivative heroin. It has been brought before the profession for the purpose of allaying cough and to take the place of codeine as a more efficient substitute. Its action in relieving cough and dyspnœa is much more prompt and decided, and the frequent deleterious after-effects of codeine and morphine—nausea, vomiting, headache, constipation, gastric pains, tinnitus, and visual hallucinations—have never been observed during its administration. Results are equally as good with children as with adults, and it has now taken a permanent place in the armamentarium of the physician.

Some time after the introduction of heroin, while I was Acting Assistant Surgeon in temporary command of the station for the United States Marine Hospital Service, I had a number of government patients, sailors of the merchant marine, at the Los Angeles Infirmary (Sister's Hospital) under my professional care. In one case of persistent



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cough, which was extremely distressing to the patient and harassing to his friends, I tried everything I had heretofore used, without obtaining even partial relief. The then resident physician, Dr. M. M. Kannon, urged me to try a new combination of heroin with other drugs, known as Glyco-Heroin (Smith), made by Martin H. Smith Company, of New York. Acting upon this suggestion, I gave a prescription for a few ounces of this preparation to be given in teaspoonful doses every four to six hours until relieved. The good effect was immediate and pronounced, and from that time to the present I have had positive results in relieving cough that I had failed to obtain in my previous experience of a quarter of a century in the active practice of the medical profession. Before giving it in the case mentioned I was inclined to be sceptical, notwithstanding the frequency of favourable reports in regard to it by respectable medical journals and leading professional men. I had tried without satisfactory results the usual mixtures "Heroin Comp.," of which there are so many, without merit, failing entirely to accomplish all that heroin can be shown to do in using the preparation indicated. To satisfy myself still further and to remove a doubt in my mind that this might be an exceptional case or a mere coincidence, I was induced to give it a trial in a series of selected cases of a similar character. The result was so satisfactory that I feel constrained to add my testimony to that of others and place the record of cases before the profession.

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Acetozone IN Typhoid Fever

What Clinical Trial Shows

1. Duration of the disease is cut short.
2. The most marked and disagreeable symptoms are ameliorated.
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4. Delirium is terminated or much abated.
5. Tympanites is almost wholly avoided.
6. Diarrhea is checked.

Acetozone is a remarkable antiseptic—*powerful*, in that it is capable of destroying any disease-germ with which it can be brought into contact; *safe*, in that it may be taken internally, in aqueous solution, in quantities limited only by the capacity of the patient to swallow and absorb it.

Supplied in ounce, half-ounce and quarter-ounce bottles, also in vials of 15 grains, six vials in a box.

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For Diagnosis of Typhoid Fever

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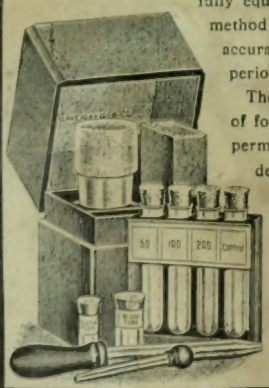
Our **Typhoid Agglutometer** simplifies the Widal test, obviating the use of the microscope and the fresh live culture of typhoid bacilli. It is fully equal to the former method in delicacy and accuracy, and much superior in convenience.



The apparatus consists of four tubes of a sterile permanent suspension of dead typhoid bacilli, a tube of blood-serum diluent, an empty tube for collecting the blood, a needle for puncture, and a pipette for withdrawing the separated serum. It contains material for fifteen to thirty tests.

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